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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of)

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North American Numbering Council)
Letter Seeking Clarification of)
Term "Technology Neutral")

DA 97-2234

CC 92-237

AT&T CORP. COMMENTS

Pursuant to Section 1.415 of the Commission's Rules, 47 C.F.R. § 1.415, and the Public Notice released October 20, 1997, AT&T Corp. ("AT&T") hereby submits its comments on the North American Numbering Council's ("NANC") request for clarification of the meaning of the phrase "technology neutral," as used in the Commission's prior orders addressing administration of the North American Numbering Plan ("NANP").

In particular, the NANC asks whether a number pooling plan that relies on the NXX-X / Location Routing Number ("NXX-X/LRN") methodology would comport with the Commission's mandate that NPA relief measures be "largely technology neutral."¹ Some NANC members have argued that NXX-X/LRN does not satisfy this standard, because wireless carriers would not be able to participate in such a number pooling scheme until they are able to implement

¹ Declaratory Ruling and Order, Proposed 708 Relief Plan And 630 Numbering Plan Area Code By Ameritech-Illinois, IAD File No. 94-102, FCC 95-19, released: January 23, 1995, ¶ 18 ("Ameritech Order"); accord Administration of the North American Numbering Plan, Report and Order, CC Docket No. 92-237, FCC 95-283, released July 13, 1995, ¶ 15 ("NANP Order").

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local number portability ("LNP") using LRN technology.² There is simply no valid basis for this contention. NXX-X/LRN number pooling will not in any way disadvantage wireless carriers, and is an important means to ensure that wireline carriers will have access to the numbering resources that are essential to local market entry. AT&T urges the Commission to clarify forthwith that number pooling measures that rely on LRN methodologies are a permissible means to alleviate the growing problem of inadequate numbering resources.

I. NXX-X/LRN-BASED NUMBER POOLING IS A PROMISING NEAR-TERM MEANS TO CONSERVE NUMBERING RESOURCES

The Second Report and Order in the Local Competition docket observed that in crafting the 1996 Act, Congress "recognized that ensuring fair and impartial access to numbering resources is a critical component of encouraging a robustly competitive telecommunications market in the United States."³ Without numbers carriers cannot serve customers, and customers cannot obtain new services.

The NANP defines a 10-digit telephone number format of NPA-NXX-XXXX, in which "NPA" represents the area code or Numbering Plan Area; "NXX" identifies the central office to which the number is assigned; and "XXXX" refers to a customer's specific line. Carriers traditionally have obtained numbers in blocks of 10,000 -- that is, a carrier requesting numbering resources receives exclusive use of a particular NXX code.

² The Commission's Number Portability Reconsideration Order recognized that "the wireless industry faces special technical challenges," and so granted wireless carriers additional time to implement permanent number portability. First Memorandum Opinion and Order on Reconsideration, Telephone Number Portability, CC Docket No. 95-116, FCC 97-74, released March 11, 1997, ¶ 134.

³ Second Report and Order and Memorandum Opinion and Order, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, FCC 96-333, released August 8, 1996, ¶ 261 ("Second Report and Order").

For wireline telephone numbers, NXX codes are assigned to a particular rate center in an area code.⁴ Because of the rating and routing requirements of the wireline network, a "carrier with a particular NXX can only serve customers associated with the rate center to which the NXX is assigned."⁵ Thus, a wireline carrier must obtain a distinct NXX for every rate center in an NPA in order to serve customers throughout that area code. For example, even if a LEC is using only 15% of the numbers in a particular NXX code assigned to it, if it wishes to serve customers in a different rate center, it must obtain another NXX code. Typical NPAs have between 50 to 150 rate centers, and many have even more.⁶

Wireless carriers also are assigned numbering resources in NXX blocks. However, wireless NXX codes are not restricted to use in a single rate center, but can be assigned in whatever geographic scope the wireless carrier deems appropriate. Wireless numbers are associated with a particular wireline rate center -- that is, calls to a given wireless NXX code are treated for billing purposes as if they terminated in a particular rate center -- but wireless carriers can assign numbers from a single NXX code as broadly as they wish within an NPA.

As the Commission is well aware, recent years have seen an explosion in demand for telephone numbering resources. This increased demand is due partly to end-user demand for

⁴ See generally Order, Pennsylvania Public Utility Commission Petition for Expedited Waiver of 47 C.F.R. § 52.19 for Area Code 412 Relief, CC Docket No. 96-98, DA 97-675, released April 4, 1997, ¶ 5 ("412 NPA Order").

⁵ Id.

⁶ For example, the 412 area code, which includes metropolitan Pittsburgh, has 180 rate centers. There are 792 NXX codes available for assignment in each NPA (all possible combinations of three digits, excluding those beginning with "0" or "1," or ending in "11"). See 412 NPA Order, ¶ 5. This means that if only five wireline carriers wished to serve every rate center in the 412 NPA, that area code would not have sufficient NXX resources to permit them to do so even if no numbers previously had been assigned from it.

numbers for uses such as wireless devices, modems and point-of-sale terminals; and partly to the needs of both wireless and wireline carriers seeking to enter markets that formerly were monopolized by a single carrier, the incumbent LEC. As a result of these pressures, there are currently more than 30 NPAs that are in a "jeopardy" situation -- that is, in which the demand for NXX codes exceeds the remaining supply.

In an effort to relieve the growing shortage of available numbers, the industry has been actively exploring strategies for using this essential resource more efficiently. As noted above, the current system requires that numbers be assigned to wireline LECs for use in a single rate center in blocks of ten thousand, even if that carrier has only a fraction of that number of customers in that rate center. Thus, demand for NXXs may rapidly exceed supply, leading to NPA exhaust, even though there may be literally tens of thousands of unused numbers remaining in an area code.

In order to make these vacant numbers available to other carriers, the industry is working to develop strategies for "number pooling." These schemes would permit carriers to share NXX blocks -- for example, to use numbers in blocks of one thousand, or (at some point in the future) even to utilize individual telephone numbers on an as-needed basis in order to avoid the creation of large vacant blocks unavailable to carriers that may need them to serve customer demand.

In the near term, existing network architecture requires that wireline number pooling must be limited to the sharing of NXX codes among carriers serving the same rate center. In addition, the feasible short-term pooling solutions developed to date all require the use of either interim or permanent local number portability ("LNP"). Other mechanisms -- for example, NXX-X number pooling, in which numbers would be assigned in blocks of 1,000 and calls routed

based a called-party's NXX-X, rather than the NXX code alone, with the seventh digit denoting the carrier to which a block of numbers was assigned -- require network modifications that the industry has determined are not currently workable.

The NANC letters referenced in the Public Notice address "NXX-X/LRN" number pooling. This pooling method uses LRN-based number portability, the permanent LNP method authorized by the Commission's rules, to permit LRN-capable carriers to share NXX codes. Under this methodology, NXXs would continue to be assigned to rate centers in blocks of ten thousand, but would be shared by carriers on an NXX-X basis. For example:

847-999-1XXX	Carrier1
847-999-2XXX	Carrier2
847-999-3XXX	Carrier3
etc.	

In the above example, carriers 1, 2 and 3 each could assign numbers from their respective thousands block of the 847-999 NPA-NXX to customers served by the rate center to which the 999 NXX was assigned.

Although there are several variants of NXX-X/LRN, that porting method essentially works by treating thousands blocks of numbers as if they had been ported using LRN. In the example above, the entire 847-999 NXX would appear in the Bellcore Local Exchange Routing Guide ("LERG") as assigned to one carrier, the "LERG-assigned carrier." The LERG-assigned carrier could assign numbers from this NXX code in the same fashion as other NXX codes, but would be allowed to assign numbers only from the particular block or blocks allocated to it. Other carriers could assign numbers in their designated thousands blocks, but would treat these numbers as if they were ported to them from the LERG-assigned carrier.

Although some aspects of NXX-X/LRN still must be refined and tested,⁷ this methodology is a promising near-term solution to the related problems of NPA exhaust and inefficient utilization of NXXs. A group of LECs, working with the Illinois Commerce Commission, hopes soon to begin a limited test of this pooling scheme in the Chicago area.⁸

II. NXX-X/LRN-BASED NUMBER POOLING DOES NOT VIOLATE THE REQUIREMENT THAT NPA RELIEF BE "TECHNOLOGY NEUTRAL"

As noted above, some NANC members have argued that NXX-X/LRN is not "technology neutral" because wireless carriers will be unable to participate in that number pooling method until they implement permanent LNP ("PLNP") and their networks become LRN-capable. This claim, however, rests on a misconception of the Commission's requirements for NPA relief planning, and should be rejected.

The Commission has not required numbering administration to treat all segments of the telecommunications industry in precisely the same fashion, nor has it mandated that the NANP ignore relevant differences in network architecture or capabilities. The Ameritech and NANP orders require administration of the NANP to be "largely technology neutral,"⁹ not to treat all carriers in absolutely equivalent fashion. Similarly, while those proceedings did not outline the specific requirements of "technological neutrality," both stated that the NANP "should not unduly

⁷ For example, some configurations of NXX-X/LRN could place unacceptable strains on LNP-related databases, unless those systems can be modified to more efficiently represent ported 1,000s blocks, rather than doing so by means of a separate database entry for each ported number. See Letter from Number Pooling Subcommittee, Illinois Number Portability Workshop, to A. Richard Metzger, Acting Chief, Common Carrier Bureau, Federal Communications Commission, October 8, 1997.

⁸ See id.

⁹ Ameritech Order, ¶ 18, NANP Order, ¶ 15 (emphasis added).

favor or disadvantage any particular industry segment or group of consumers" and "should not unduly favor one technology over another."¹⁰

There is thus no basis for the claim that any numbering administration policy that treats wireless and wireline carriers differently is *per se* not "technology neutral." Indeed, if the Commission demanded perfect regulatory symmetry, wireline carriers could not have been required to implement permanent LNP before their wireless counterparts must provide it. The Number Portability Reconsideration Order correctly recognized that some wireless carriers may require additional time to implement LRN-based portability -- but the Commission did not find that this fact required wireline carriers to delay their provision of this important capability. Instead, because the nature of the wireline network made PLNP possible on a faster timetable, the Commission ordered wireline carriers to implement LRN beginning in 1997.

The same logic that led the Commission to require wireline carriers to implement LRN before wireless providers also compels the conclusion that wireline carriers may utilize LRN to more efficiently utilize numbering resources. NXX-X/LRN is a capability, like LRN itself, that the wireline network will be able to provide before the wireless network can do so. The public interest plainly is best served by enabling carriers to share NXXs, just as it was served by permitting end-users to port wireline telephone numbers prior to implementation of wireless LNP. The fact that wireless carriers may not be able to participate in NXX-X/LRN at this time is not a valid basis to postpone the substantial potential benefits of this pooling method. In any event, because wireless carriers are not required to use NXX codes to serve a single rate center, they are far less likely than wireline carriers to contribute to the problem of inefficient utilization of NXXs.

¹⁰ Ameritech Order, ¶ 18, NANP Order, ¶ 15 (emphasis added).

Moreover, the prompt implementation of number pooling measures will in no way injure wireless carriers -- in fact, those providers should enjoy considerable benefits from NXX-X/LRN. The Second Report and Order held that wireless-only overlays are not technology neutral because such NPA relief plans "deny particular carriers access to numbering resources because of the technology they use to provide their services...."¹¹ It is clear, however, that NXX-X/LRN would not affect wireless carriers' ability to obtain NXX codes from which to assign telephone numbers to their customers. If anything, implementation of wireline number pooling would increase the availability of NXX codes.

As described above, current wireline network architecture and numbering policy require a wireline carrier to obtain an NXX code for every rate center it serves. A wireline carrier thus may need more than a hundred NXXs to serve an entire NPA, but might actually use only a fraction of each of those blocks of 10,000 numbers. Because NXX-X/LRN permits LRN-capable carriers to share NXX codes, overall demand for those codes is likely to be sharply reduced. This reduction in demand in turn means that more NXX codes will be available for all telecommunications services -- including wireless.

Finally, any concern that NXX-X/LRN could be used to discriminate against wireless carriers is speculative and unsupported. Indeed, there is no evidence that such a scenario would ever come to pass. The Industry Numbering Committee ("INC") has expressly stated its intent to ensure that all carriers continue to have nondiscriminatory access to numbering resources under LNP-based pooling schemes: "It must be recognized that only LNP capable networks

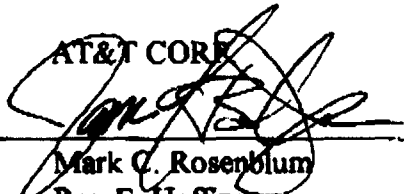
¹¹ Second Report and Order, ¶ 305 (emphasis added).

should participate in number pooling. Non-LNP-capable networks, nonetheless, must have equivalent access to adequate numbering resources via current industry assignment guidelines."¹²

CONCLUSION

There is no valid basis for the claim that NXX-X/LRN and other pooling methods that rely on LNP are not "technology neutral" or otherwise improperly discriminate against wireless carriers. AT&T urges the Commission to issue its ruling in this proceeding forthwith, so as not to disrupt industry efforts to develop these promising short-term means to conserve valuable and limited numbering resources.

Respectfully submitted,

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¹² Industry Numbering Committee, Initial Report to the North American Numbering Council on Number Pooling, October 17, 1997, p. 42, n.10.